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But, oh! let all be taught from Butler's fate,
Who hope to make their fortune by the great,
That wit, and pride, are always dangerous things,
And little faith is due to courts and kings.

DISCOVERIES AND IMPROVEMENTS, IN ARTS, MANUFACTURES, AND AGRICULTURE.

Specification of the Patent granted to John Hives, of Holbeck, in the parish of Leeds, in the County of York, Linen-manufacturer; for a machine for hackling or dressing Hemp, Flax, and other materials.

Dated, August 12, 1811.

ON the axis are fixed two wood or metal rims or bearers, about fifteen inches diameter, more or less, according to the length of the flax or hemp to be dressed. On the circumference of the rims or bearers are fixed four cross rails; on each of the cross rails are fixed two or more hackles, according to the number of operations the flax or hemp is required to pass. To the rim or bearer are also fixed four, back-boards, each of which may be raised or lowered by the screws, so as to adjust the back boards to the height required for working the flax or hemp upon the pins of the hackles. The axis, by the two cranks and the two levers, gives motion to two levers on which is fixed the holder rail. The holder rail drawn to a scale of an eigthth of an inch to an inch, on which are fixed four smooth plates of thin iron, turned up about three inches at the front to receive the holders, packed a sufficient height from the rail to allow the holders to pass freely. A motion is given to the pulley, on the crank axis, which may make about one hundred revolutions in a minute, and by a pinion or nut gives motion to the stud wheel, and by it to the wheel on the axis, which makes one revolution for four of the crank. The crank by the levers raises the holder rail about five inches during the time that the hackle passes under it; and falls it immediately after the hackle has passed it, which gives the flax or hemp a stroke upon the hackle, and makes the points of the hackle-pins pierce the fibres which are split by the continued motion of the hackle. The flax or hemp is laid straight across the lower part of the holder, between the screws, upon which the top part of the holder is laid, and screwed tight. The holder thus filled with about six or eight ounces of flax or hemp, is put into the slide on the holder rail, over the set of coarser hackles; when the flax or hemp is sufficiently cut or worked on one side, the boy who attends the machines turns the holder to the other, and replaces it in the slide, and in the same manner works it on the finer hackles.*

Specification of the patent granted to Robert Goswell Giles, of the city of London, Merchant; for an invention of a Cap or Cowl of a new construction, to be placed on the tops of Chimneys.

Dated, February 6, 1812,

The shape of the cap is that of a cylinder, open at both ends the area of the base or lower end being double that of the top of the chimney-pot, and the upper end is constructed by a shoulder, leaving the aperture something longer than the top. A lid, or cover, whose upper surface is convex, is fixed by brackets to the inside of the cap, about three inches below the opening, and from three to four inches, (as the case may require,) above the top of the pot, and projects about one-eighth of an inch over the rim, to prevent the rain, &c. from dropping down the chimney. The cap is made to descend from three to six inches below the top of the pot, and in some instances the sides are carried up straight, without the shoulder; in which cases, the lid should not be distant more than two and a half or three inches from the top of the pot. The cap is fastened to the pot by four brackets, and may be made of iron, or any other proper material.

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* A plate, describing this machine, is given in the Repertory of Arts, &c., No. CXXI., June, 1812.

Observations by the Patentee.

This chimney-cap is principally intended to remedy those chimnies that smoke when the wind is in a particular quarter, and for such *only* it is professed to be a *perfect cure*, since it is impossible for the wind, in whatever direction it may come, to blow down the chimney. It will also prevent rain, snow, &c. from falling down the chimney, the unpleasant consequences of which are well known. By the cap being stationary, and admitting a free passage for the smoke on all sides, it is not liable to the inconveniences of most of the moveable tops, by becoming soon clogged up, and out of order.

It is particularly adapted to ships, as it requires no shifting, and acts the same in all directions of the wind.

Method of making Bricks, so as to form cheaper and firmer Buildings, and useful under-ground Drains; by John Stephens, Esq.

(From the Transactions of the Society for the Encouragement of Arts, Manufactures, and Commerce.)

I have sent, for the inspection of the Society of Arts, &c., three closure bricks, which, on examination, you will will find to have been cut three-fourths of the way through in the middle, by a wire, and the whole of the way through at each end, which leave the ends square, and handsome for work.

The bricklayer, to divide each brick in length, has only to take the brick in his left hand with the mark, or cut downwards longitudinally, and, by one smart blow with the trowel, he will have two complete king-closures, with which he can easily make four common closures.

I have shown them to many workmen, who all approve of them. I had two-hundred and fifty of them made by a brickmaker for an experiment, and I have ordered two thousand more. The builders who do the principal part of my work, have had some on their own account, and have since increased their orders. I have no doubt, when they are better known, they will come into general use.

A considerable saving in labour and waste of bricks may be effected by their use, particularly in walls where piers are built, and where there are many openings, the work will also be rendered more substantial.

There will be a saving in room and materials where the back of a chimney is built against a straight wall, particularly in flues for low buildings.

They will be found useful in ci-